PCS licenses which are divided into 30 MHz blocks.[51] For example, the upfront payment for one channel in the New York MTA would be approximately $52.8 million dollars ($0.02 x 100 MHz x 26,410,000 population).[52] At $.02 per MHz-pop, the upfront payment for one channel in a small MTA such as Knoxville, Tennessee would be in excess of $3 million dollars ($0.02 x 100 MHz x 1,722,000 population = $3.44 million). Such high upfront payments could constitute a barrier to entry.[53] Accordingly, the upfront formula should be reduced to reflect the larger amount of spectrum being licensed.[54]

E. The Commission should assist small businesses by removing unnecessary restrictions on license use

WinStar supports the Commission's proposals to assist small businesses. Bidding credits and installment payments should aid such companies by reducing their capital costs, enabling them to compete more effectively.[55] WinStar also believes that the Commission should impose less restrictive transfer requirements than those currently

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[51] The D, E, and F block licenses are substantially smaller at 10 MHz.

[52] The MTA population figures are taken from the FCC's 900 MHz SMR Bidder Package.

[53] The upfront payments would be particularly burdensome for smaller firms such as "designated entities" ("DEs"). See 47 U.S.C. § 309(j)(3)(B).

[54] The Commission has the authority to modify the upfront payment formula. See Competitive Bidding Second Report and Order, 9 FCC Rcd at 2378 ¶ 172 & n. 132, 2379 ¶¶ 178-80 (FCC will modify upfront payment formula when circumstances warrant); Part 22 Rewrite Order at ¶ 104 (upfront payment formula may be modified on a service-specific basis) (citation omitted).

[55] See Competitive Bidding Second Report and Order, 9 FCC Rcd at 2391 ¶¶ 241-42.

applicable to PCS DEs.[56] Transfer restrictions prevent licenses from reaching their highest and best use and block concomitant efficiency and welfare gains.[57] In the DE context, transfer restrictions would promote inefficiency by causing DEs to retain licenses that they are not utilizing fully instead of transferring the licenses to other parties that can make more efficient use of them. If the FCC assumes that restrictions must be imposed in order to prevent entities from "gaming" the designated entity rules, WinStar believes that the agency's proposal to require small businesses that transfer their licenses to repay the amount of the bidding credit plus interest constitutes an adequate deterrent.[58]

Finally, the attribution and affiliation rules should be simplified and their proposed levels should be raised. As shown in Section VII.B.4, analysis of the underlying economics supports raising the attribution limits. Similarly, the DE regulatory structure, with its morass of complicated control group requirements, and overinclusive affiliation rules, is ill-suited to the current competitive environment. Those rules were adopted to safeguard against the existence of "sham" applications at a time when the FCC's

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[56] The Commission has adopted transfer restrictions barring assignment of broadband PCS entrepreneur's block licenses for a period of three years and then for another two years, transfer is allowed only to another designated entity. See In the Matter of Implementation of Section 309(j) of the Communications Act - Competitive Bidding, *Fifth Report and Order*, PP Docket No. 93-253, 9 FCC Rcd 5532, ¶ 128 (1994) ("Competitive Bidding Fifth Report and Order").

[57] See Section VII.B.1.

[58] See NPRM at ¶ 91.

rules allowed for significant preferences for minorities and women. In the wake of the Supreme Court's decision in Adarand Constructors, Inc. v. Pena[59] to subject race-based preferences to strict scrutiny, the FCC removed such preferences in order to auction swiftly the PCS C-block.[60] While the FCC's efforts to quickly commence the C-block auctions are commendable, there is no longer a need for such extensive regulatory safeguards because the absence of preferences for minorities and women reduces significantly the risk that applications falsely claiming such preferences will be filed.

There is no valid basis for the Commission to perpetuate such inefficient license restrictions. The FCC's goal is to increase the participation of women, minorities, small business and rural telcos[61] consistent with Congressional directive.[62] Simpler, less restrictive rules would further that goal by increasing DEs' ability to attract the capital necessary to participate in the proposed 37-40 GHz band auctions. WinStar believes that these approaches are more likely to maximize and increase the diversity of bidder participants.

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[59] 115 S. Ct. 2097 (1995).

[60] See In the Matter of Implementation of Section 309(j) of the Communications Act - Competitive Bidding, *Sixth Report and Order*, PP Docket No. 93-253, 78 R.R.2d 934 (1995).

[61] See NPRM ¶¶ 65-73.

[62] 47 USC § 309(j)(3).

VII. THE 37 GHz AND 39 GHz BANDS SHOULD BE SUBJECT TO MAXIMUM REGULATORY FORBEARANCE

As a matter of public policy, maximum regulatory forbearance is required. As demonstrated below, agency regulation has been designed principally to protect against market power, a condition not present in the marketplace to which the 37-40 GHz band belongs. The 37-40 GHz band is part of a larger competitive market. The Commission should recognize the competitive nature of the band and act accordingly.

A. The 37-40 GHz band is part of a much larger competitive market and does not alone comprise a discrete market

In a study prepared for WinStar and appended to these comments, Dr. Steven R. Brenner and Dr. John R. Woodbury of Charles River Associates conclude that the 37 GHz and 39 GHz bands are part of a much larger competitive market.[63] Brenner and Woodbury reach this conclusion through utilization of the Merger Guidelines used by both the Department of Justice and the Federal Trade Commission.[64]

1. The Merger Guidelines

As explained in more detail by Brenner and Woodbury, the Guidelines are used to determine whether competition will decrease as a result of a reduction in the number of competitors. The analysis

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[63] Steven R. Brenner & John R. Woodbury, Competitive Market Considerations in the Licensing of the 37 to 40 GHz Band, 33 (March 4, 1996) ("Brenner and Woodbury") (Based on its current and foreseeable uses, it is "quite unlikely that service at 37-40 GHz is a distinct product market."), 60 ("Our analysis concludes that it is most unlikely that services offered at 37-40 GHz will constitute a distinct product market.").

[64] Department of Justice and Federal Trade Commission Horizontal Merger Guidelines, April 2, 1992, Bureau of National Affairs, Special Supplement ("Merger Guidelines" or "Guidelines").

begins by defining the relevant product and geographic markets and then examining the types of firms in the market.[65] Consideration is also given to the ability of existing companies to expand their operations, to the possibility of entry, and to a variety of other factors that may affect the extent of competition.[66]

Under the Guidelines, a market is defined as the smallest group of products and the narrowest geographic region in which a small price increase by a hypothetical monopolist would be profitable.[67] Thus, with respect to any single product or any narrow geographic area, if a monopolist could profit from a price increase, a market will be found.[68]

To determine whether a proposed merger should be permitted to proceed, the Guidelines begin by evaluating the number of firms in the market and their market share to create what is known as that market's Herfindahl-Hirschman Index (HHI) number.[69] Markets with HHIs below one thousand are considered unconcentrated with mergers unlikely to have adverse competitive effects. Markets with an HHI between one thousand and eighteen hundred are considered "moderately

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[65] See Brenner and Woodbury at 2-6.

[66] See id.

[67] Id. at 12-13.

[68] Id.; see also United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 404 (1956) (relevant product market is comprised of those products "that have reasonable interchangeability for the purposes for which they are produced -- price, use and qualities considered").

[69] The HHI calculations are explained in more detail by Brenner and Woodbury at pages 37-40 of their paper.

concentrated." As long as a merger would not increase the HHI by more than one hundred points, it is considered not to have adverse effects. Highly concentrated markets are those whose HHI is in excess of eighteen hundred. For such markets, mergers that increase the HHI less than fifty points are considered unlikely to cause adverse effects.[70]

The Justice Department has previously stated that the Guideline thresholds should be less stringent when used to analyze markets outside of the merger context.[71] This is because of a concern that a mechanistic application of the Guidelines could stifle competition on the merits and deter expansion by existing firms. As Brenner and Woodbury point out, a rigid application of the Guidelines to an overall evaluation of market performance is discouraged because it would deter firms from trying new marketing or production techniques for fear of becoming too successful.[72]

Furthermore, the HHI is not the sole determinative factor as to whether a merger should be permitted.[73] Substantial weight is also given to factors other than concentration and market share. Various appellate courts have considered factors such as the sophistication or power of the product's buyers, and the ability of competitors to

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[70] Brenner and Woodbury at 40.

[71] Brenner and Woodbury at 43 (citing *Oil Pipeline Deregulation*, U.S. Dept. of Justice, Antitrust Div. (May 1986), p. 30.)

[72] Id.

[73] Id. at 39.

expand their existing operations.[74] Consideration of these and other factors -- along with market share and concentration -- is known as the "rule of reason" analysis.[75] It is such an analysis that is employed by Brenner and Woodbury in assessing the competitive nature of the market.

2. The 37-40 GHz band is not a discrete product market

Brenner and Woodbury find that the 37-40 GHz band is not a discrete market. To reach this conclusion, they first identify the expected services to be offered in the near term in that band and then determine whether substitute services exist. To be considered a substitute service, a service must be similar in price and quality; enough consumers must be willing to switch to it in response to a small price increase by a hypothetical monopolist in the 37-40 GHz band to render the price increase unprofitable.[76]

To define the services to be offered in the 37-40 GHz band, Brenner and Woodbury begin by examining the Commission's rules.[77] They conclude that the harmonization of the 37 GHz rules with those of 39 GHz would result in the ability to offer "essentially the same

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[74] Id. at 41-42 (citing United States v. Baker Hughes, Inc., 908 F.2d 992 (D.C. Cir. 1990) and United States v. Syufy Enters., 903 F.2d 659 (9th Cir. 1990)).

[75] Id. at 42.

[76] Id. at 21-22.

[77] Brenner and Woodbury note that some uncertainty exists as to the services to be offered in the band because licensees are just beginning to offer service. Consequently, their analysis focuses on supply responses (i.e., whether the kinds of services likely to be produced using the 37-40 GHz band can also be produced using other spectrum bands or "wireline" alternatives.).

services" throughout the 37-40 GHz band.[78] Next, they analyze the various services WinStar is or soon intends to be offering and use those services as a guide to the types of services that may be offered in the 37-40 GHz band.[79] Such services include: (1) the provision of wireless local loops; (2) call termination or origination services to long distance companies; (3) connection of CAP's or LEC's customers to their fiber rings; (4) connection and interconnection services to private networks operated by business, government, or other institutions; (5) backbone services for mobile service providers including traffic between and among cell sites, repeaters and the wired local network; (6) internet access; and (7) cable headend applications.[80]

Those types of services are not unique to the 39 GHz spectrum.[81] Consequently, Brenner and Woodbury conclude that consumers "will have substantial spectrum and non-spectrum alternatives for services offered in the 37-40 GHz band."[82] The FCC's rules do not prevent the supply of substitutable services on "substantial amounts of other spectrum allocated to fixed point-to-point service."[83] In particular,

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[78] Id. at 18 (relying on FCC's statements that such services will be used in the 37-40 GHz band).

[79] Id. at 18-19.

[80] Id. at 19.

[81] Brenner and Woodbury at 20 (WinStar's "main innovation . . . is developing the ability to supply these services in the 37-40 GHz band, not designing services with new and sharply different characteristics from those generally available.").

[82] Id.

[83] Id. at 21.

Brenner and Woodbury identify the following amounts of spectrum that appear to be capable of supplying substitutable service at prices similar to those offered in the 37-40 GHz band: (1) 2 GHz in the 18 GHz band; (2) 2.4 GHz in the 23 GHz band; (3) 1 GHz in the 28 GHz band tentatively allocated to LMDS service; and (4) 2.8 GHz for LMWS (licensed millimeter wave service) in the 40.5-42.5 GHz and 47.4-48.2 GHz bands.[84] They point out that neither equipment concerns nor technical reasons would prevent those spectrum bands from serving as good substitutes for service in the 37-40 GHz band.[85] They also note that no alternate uses would likely be of such high value as to prevent those bands from supplying substitutable service.[86] Brenner and Woodbury also conclude that various non-spectrum based substitutes generally exist, including both fiber cable and copper cable.[87] Like 37-40 GHz, both fiber optic and copper plant are capable of being used for short hops with similar transmission quality and reliability.[88]

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[84] Id. at 21-22. The Commission has acknowledged that both LMDS services operating in the 28 GHz band and other wireless service providers "may provide services that compete with local exchange carriers in the provision of local exchange service." See CMRS Flexibility NPRM at ¶ 9 (quotations and citations omitted).

[85] While some of the bands are capable of being utilized for distances longer than those in the 37-40 GHz band, they are also capable of the shorter hops of the 37-40 GHz band. See Brenner and Woodbury at 24.

[86] Id. at 27 ("[I]t does not appear that higher-valued use would prevent the spectrum identified above from supplying substitutes for service at 37-40 GHz.").

[87] Id. at 16-17. See also Mike Mills, "Making Copper a Bit Faster," Washington Post, Feb. 22, 1996 at D9 (discussing use of copper wires by Bell Atlantic Corp.).

[88] Id. at 29.

Moreover, Brenner and Woodbury also note that cost considerations may not be dissimilar.[89] Hence, they believe that "broad substitutability [exists] between spectrum-based microwave service and services provided over fiber [and copper plant]."[90] Accordingly, they find it "very unlikely" that service at the 37-40 GHz band is a distinct product market.[91]

Brenner and Woodbury describe the factors that will determine the geographic market definition, but do not reach firm conclusions about the proper geographic market. They note that a BTA would be proper if "all suppliers of service in the same product market also supplied service throughout the BTA, and only in that BTA."[92] But, some competing suppliers may serve only part of the BTA while others, such as LECS, may serve an area greater than a BTA.[93] Consequently, the relevant geographic area may be smaller or larger, depending on the size of the area served by competing suppliers.[94] For purposes of

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[89] Id. at 31.

[90] Id. at 29.

[91] Id. at 47. See also id. at 59 ("[W]e think it most unlikely that 37-40 GHz service will constitute a distinct product market.").

[92] Id. at 33.

[93] Id. at 34-35.

[94] Brenner and Woodbury explain that where competitors serve differing areas, the appropriate geographic market should be defined as the area in which suppliers have the ability to price discriminate, e.g., charge different prices to consumers depending on their location. They note also that if some firms serving broad areas cannot price discriminate in smaller areas, "in many cases this will broaden the relevant geographic market." See id. at 34.

their analysis of concentration in spectrum-only product markets -- how competitive is the structure of these markets -- Brenner and Woodbury utilized BTAs because use of BTAs would not understate concentration so long as suppliers can serve the entire BTA. As Brenner and Woodbury observe, "[u]nder existing or proposed rules, firms supplying the spectrum-based substitutes we have considered could serve an entire BTA. Some LECs will provide service throughout a BTA."[95] Although Brenner and Woodbury utilized BTAs for their analysis, they expressly noted that MTA service areas -- as proposed by WinStar -- could increase the size of the geographic market and "would [] be likely to increase the number of suppliers and reduce concentration."[96] Thus, the market could be even more competitive than the following discussion demonstrates.

3. **The market is competitive**

As shown, the 37-40 GHz band constitutes only a small part of the total capacity in the larger product market. Brenner and Woodbury point out that, given the LECs' well-known fiber capacity, the number and size of 37-40 GHz licensees is unlikely to have any significant impact on overall market concentration.[97] Acquisition of 37-40 GHz licenses would affect only "a very small part" of the total market and could have "no substantial impact" on market performance or

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[95] Id. at 35.

[96] Id. at 36 n.50.

[97] Id. at 48.

competition.[98] Thus, assuming that the FCC agrees that the 37-40 GHz band is part of a market that includes both spectrum-based and nonspectrum-based services, competitive concerns do not support either restrictions on use or a spectrum cap.[99]

A similar result occurs if the overall market is limited only to spectrum-based services.[100] Using the previously identified spectrum-based competitors, Brenner and Woodbury find that total market capacity is 7.8 GHz, of which only 2.8 GHz are in the 37-40 GHz band.[101] The proposed spectrum cap of 600 MHz (for paired channels) would yield an HHI of only 582 which is well within the boundary for unconcentrated markets.[102] Allowing a firm to hold up to 14 paired channels (1.4 GHz) in the 37-40 GHz band would still yield an HHI of only 1345 which is within the middle range of "moderately concentrated" markets.[103] That number, however, was calculated using a "worst case" scenario in which it is assumed that every firm in the 37-40 GHz band acquires up to the maximum amount of spectrum allowed

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[98] Id. In fact, they note that if the larger product market is not competitive, it would be due to the LEC's "very large shares" of the market. Id.

[99] Id. at 48-50.

[100] As noted, the HHI analysis utilized BTAs. The HHI numbers might well drop (meaning the markets would be more competitive) if the FCC licensed the 37-40 GHz band on an MTA basis. See id. at 36 n.50.

[101] Brenner and Woodbury at 49.

[102] Id.

[103] Id.

under the cap.[104] If only one firm were to acquire the maximum allowable licenses and the rest of the spectrum was divided among four other firms, the market would again be unconcentrated with an HHI of 917.[105]

Brenner and Woodbury also calculate HHIs for narrower markets which contain only a few of the substitutable spectrum blocks. Under the "worst case" scenario, if the relevant market excluded any spectrum above 40 GHz, the proposed cap still yields a result of only 776, comfortably within the unconcentrated range.[106] Application of the worst case scenario to a spectrum cap of 14 paired channels results in a rise to 1704, which is considered only "moderately concentrated."[107] Finally, if the market encompasses only the 37-40 GHz, 28 GHz, and above 40 GHz bands, the proposed cap still leaves the market in the unconcentrated range.[108] A cap of 10 paired channels would place the market in the "moderately concentrated" range, assuming a worst case scenario. In light of the above, Brenner and Woodbury conclude that this market is competitive and would remain so even if the spectrum cap were raised to 1000 or 1400 MHz.[109]

In addition to the HHI analysis, Brenner and Woodbury conclude that the competitive nature of the market is bolstered by the

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[104] Id. at 50.

[105] Id.

[106] Id. at 51.

[107] Id.

[108] Id.

[109] Id. at 52.

existence of several factors which make it difficult for competitors to collude. Those factors are: (1) continued technological development of both the 37-40 GHz technology and of technology used to supply competing services; (2) the rapid pace of regulatory change in telecommunications; (3) the structure of costs; and (4) the impact of large buyers and individual bidding for contracts.[110] According to Brenner and Woodbury, new technology will expand service offerings and reduce costs which, in turn, is likely to make it more difficult for competitors to coordinate pricing agreements.[111] Similarly, the passage of the 1996 Telecommunications Act will allow new competitors to emerge and ease regulatory constraints on incumbents LECs.[112] Brenner and Woodbury also note that spectrum and non-spectrum competitors have different cost structures: spectrum-based services have low fixed costs and higher marginal costs as compared to cable-based services which have higher fixed costs but lower marginal costs.[113] Such different cost structures make it more difficult to agree on a common set of prices.[114] Finally, contracts for large

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[110] Id. at 53.

[111] Id. at 53-55.

[112] Id. at 55-56.

[113] Id. at 56-58.

[114] Id. Firms may have somewhat different cost structures and still compete in the same product market so long as the firms can supply many customers at similar overall cost levels. The similarity of cost levels, and of the services being offered, make it possible for the firms to offer customers similar and substitutable services at similar costs. At the same time, differences in cost structure give the firms differing preferences for price structure and for how far above cost they would like to set prices.

service volumes with confidential terms give suppliers "increased incentive" to deviate from any attempt at coordinated pricing.[115] In sum, various market forces exist which tend to sustain competition by inhibiting any attempts at collusion by competitors in the market to which the 37-40 GHz band belongs.

B. The Commission should rely on market forces and not regulation

The underlying goal of the NPRM is for the 37 GHz and 39 GHz bands to reach their highest and best use and maximize welfare. To sustain that goal, the FCC proposes to impose various restrictions on licensees. Market forces, rather than the proposed restrictions, will yield the results desired by the Commission.

As discussed in Section II, competition maximizes welfare. Brenner and Woodbury note that with competition "prices are driven toward costs, society's resources are efficiently allocated among the various goods and services that can be produced, and consumers must pay no more than necessary to secure these products."[116] They further observe that competition spurs firms to adopt new products, services, technologies, and cost-reducing innovations.[117] In sum, competitive forces will drive licensees to offer new and innovative technologies at the lowest possible price. Government regulation, in contrast, generally results in inefficient outcomes, thereby depriving the public of welfare gains (low prices, new technologies, etc.) that

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[115] Id. at 58-59.

[116] Brenner and Woodbury at 7.

[117] Id. citing F.M. Scherer and D. Ross, Industrial Market Structure and Economic Performance, 18-29 (3d ed. 1990).

otherwise would be realized.[118] The Commission has recognized this and has refrained from regulating where workable competition was present.[119] As discussed above and below, the competitive nature of the market removes the need for extensive regulation, such as proposed in the NPRM.

1. The Commission has correctly determined that licenses should have a ten year term and that restrictions on transfer and eligibility are unnecessary

WinStar supports the Commission's proposals to: (1) impose a ten-year term on licenses with a renewal expectancy; (2) allow open eligibility; and (3) place no restrictions on transfer.[120] Such proposals are pro-competitive. The long license term and significant renewal expectancy should inspire licensees to make investments in

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[118] See Section II. See also In the Matter of Rulemaking to Amend Part 1 and Part 21 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band and to Establish Rules and Policies for Local Multipoint Distribution Service, *Second Notice of Proposed Rule Making*, CC Docket No. 92-297, 9 FCC Rcd 1394 ¶ 38 (1994) ("Competition tends to encourage efficient operation by licensees, and to produce lower prices, which in turn may stimulate demand for more services and may encourage the development of innovative, new services, maximizing the economic potential of the spectrum.").

[119] See Section II. See also In the Matter of Streamlining the International Section 214 Authorization Process and Tariff Requirements, *Notice of Proposed Rulemaking*, FCC 95-286, IB Docket No. 95-118, at ¶ 1, (released July 17, 1995) ("[B]ecause regulation can interfere with market forces, it may also have an adverse impact on economic efficiency and consumer welfare."); Part 22 Rewrite Order, (government regulations unnecessarily burden markets that are competitive) (Statement of Commissioner Chong); NPRM at ¶ 122 (restrictions on transfer hampers licensees' from putting spectrum to its highest valued use).

[120] NPRM at ¶ 97. The FCC did, however, propose certain transfer restrictions for DEs. WinStar's position on those restrictions is contained in Section VI.E.

their systems.[121] That will benefit the public.[122] Open eligibility and no transfer restrictions allow spectrum to reach its highest and best use.[123] In turn, that should generate welfare benefits for the public.

2. Restrictions should not be placed on the use of the 37-40 GHz band

Restrictions on the use of the 37-40 GHz band should not be imposed. Flexible use of spectrum leads to advances in efficiency, increases in competition, and improvements in consumer welfare.[124] As WinStar noted in comments it filed in the CMRS Flexibility proceeding, flexible use will allow licensees to "take advantage of technological

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[121] See In the Matter of Amendment of the Commission's Rules to Establish New Narrowband Personal Communications Services, *First Report and Order*, GEN Docket No. 90-314, 8 FCC Rcd 7162 ¶ 35 (1993) (without ten year term and renewal expectancy, narrowband PCS licensees might be reluctant to invest in their systems); In the Matter of Amendment of the Commission's Rules to Establish New Narrowband Personal Communications Services, *Second Report and Order*, GEN Docket No. 90-314, 8 FCC Rcd 7700 ¶ 131 (1993) (ten year term and renewal expectancy are conducive to investment); DBS Order at ¶ 130 (same).

[122] See id.

[123] In the NPRM, the Commission aptly observed that "transfer restrictions may reduce the ability of licensees to put this spectrum to its highest valued use." See NPRM at ¶ 97. With respect to eligibility requirements, the Commission has similarly found that "[w]here multiple applicants are interested in serving a certain geographic area, we believe it is inappropriate to limit eligibility." Part 22 Rewrite Order at ¶ 66.

[124] See FCC News Release, "Chairman Hundt Says Telecom Bill Will Spur Genuine Competition; Urges More Uses of New Spectrum and Information Technology" (Feb. 2, 1996) (The flexible use of spectrum helps "foster innovation and competition [and] also stimulate[s] infrastructure investment, job creation, and efficient spectrum use."); see also CMRS Flexibility NPRM at ¶ 24 (flexible use "should allow licensees to adapt quickly to technological innovation and changing consumer demands").

advances as they occur and to pass on the benefits of such advances to consumers."[125] Flexible use also conserves FCC resources as it would "eliminate the need for the Commission to initiate a rule making or grant waivers each time a [licensee] wishes to adjust its operational mode to respond to consumers' changing communications requirements."[126] Use restrictions, in contrast, would consume agency resources and discourage innovation, which is responsible for most, if not all of the current uses of the 37-40 GHz band.

The 37-40 GHz band was traditionally thought to be of little use given its high frequency. With the introduction of PCS services, the band was thought to have excellent potential for the provision of PCS backhaul services. Even before PCS usage of the 39 GHz band was suggested. WinStar proposed using the spectrum to compete with wireline local loop providers. Indeed, WinStar now provides the following services in the 37-40 GHz band: (1) custom service call center operations for a major financial service company; (2) high bandwidth services for a teaching hospital; (3) private networks employed by a Department of Defense agency, a multi-billion dollar textile manufacturer, and a university; (4) local access for long distance providers; (5) voice and data communications backup in the event of disasters or unplanned outages for the City of New York; and (6) connections to switches from sites and micro cells for PCS

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[125] See Comments of WinStar Communications, Inc., in WT Docket No. 96-6, at 2-3 (March 1, 1996).

[126] Id. at 3 (quoting CMRS Flexibility NPRM at ¶ 9).

carriers.[127] Other licensees propose to use the spectrum in similar ways.[128] This history demonstrates that technological advances have caused the 37-40 GHz band to evolve from a spectrum band with few valuable uses to one of increasing importance. To encourage the continuing evolution of the 37-40 GHz band, the Commission should refrain from imposing restrictions on the use of the spectrum.[129]

Additionally, WinStar notes that in the CMRS Flexibility NPRM, the Commission proposed that mobile radio providers be allowed to offer fixed services. According to the Commission, that "should increase competition within wireless services and promote competition

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[127] WinStar plans to provide shortly; (1) DS-3 capacity products; (2) encryption services for DOD agencies and other secure networks; (3) full disaster recovery capabilities; (4) internet access services; and (5) cable headend services.

[128] Applications in the 39 GHz band filed by Michigan Bell Telephone Company for Ameritech Corporation (FCC File No. 9510383, Sept. 25, 1995) have cited to a variety of expanded uses for 39 GHz. Ameritech cites disaster protection and the provision of more reliable, flexible and cost effective services to customers utilizing LANs. Ameritech's Comments also allude to wireless equal access and LAN-to-LAN applications. See Ameritech App. at 3. GTE Macro Communications Corporation (FCC File No. 9402786, Jan. 14, 1994) also stated in an application for 39 GHz authority that it wanted to use the license for a variety of services, including but not limited to: "cellular back haul, all forms of data transmission, telephony traffic routing and remote antenna systems." PacTel has also filed an application (FCC File No. 9408363, July 25, 1995) discussing the establishment of a framework for the delivery of broadband multimedia services to public schools, public libraries and community colleges throughout the State of California. Similarly, Pacific Bell Mobile Services in its Comments observed that the 37-40 GHz band could be used for a wide variety of uses, including support for competitive access providers of digital communications. Pacific Bell Comments at 1.

[129] WinStar requests that the Commission undertake a study of potential engineering problems and coordination issues with its Canadian and Mexican counterparts. Licensees should be allowed to operate up to the edge of the United States' borders.

between wireless and wireline services."[130] For the same reasons, licensees in the 37-40 GHz band should be given the flexibility to offer mobile, video and other services as the technology to offer such services becomes available. As shown, such flexibility would allow 37-40 GHz licensees to make use of technological advances as they take place and to confer rapidly the benefits of such advances upon consumers.[131]

3. The spectrum cap should be raised if not removed altogether

The NPRM solicits comment on whether the 37-40 GHz band represents a discrete service.[132] If so, it proposes to limit licensees to six of the 28 paired channel blocks and two of the four unpaired channel blocks in each BTA in the combined band.[133] That limit, the Commission observes, would guarantee at least five operators at 37-40 GHz in each service area.[134] As demonstrated above, the services provided by use of the 37-40 GHz band do not represent a discrete market. The proposed spectrum cap is therefore unnecessarily restrictive.

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[130] See CMRS Flexibility NPRM at ¶ 1.

[131] See Comments of WinStar Communications, Inc., in WT Docket No. 96-6, at 2-3 (March 1, 1996). See also Mark Lewyn, "Wireless' Wild, Wild North," Business Week, March 11, 1996, at 87-88 (Commission's "hands-off approach to licensing at the 37-40 GHz [band]" has "helped advance" the evolution of that spectrum band.).

[132] See NPRM at ¶ 112.

[133] Id.

[134] Id.

A spectrum cap is needed only where there is evidence of market failure, i.e., where acquisition of spectrum would tend to give a single licensee market power.[135] As shown in Sections VI.A.2 and A.3, the 37-40 GHz band is only a small part of a much broader competitive market. Where, as here, overall market structure is competitive, there is little reason to cap the amount of spectrum that may be held in some subset of the market because a cap would have little influence on overall market conditions.[136] That is particularly true here because the presence of non-spectrum substitutes (fiber and copper plant) prevents control over the 37-40 GHz band from conferring market power.[137] "It is unlikely that any cap is justified on the amount of 37-39 GHz spectrum a firm can license" if the firm "competes in the same product market with non-spectrum based technology."[138]

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[135] See, e.g., In the Matter of Implementation of Sections 3(n) and 332 of the Communications Act - Regulatory Treatment of Mobile Services, *Fourth Report and Order*, GEN Docket No. 93-252, 9 FCC Rcd 7123 ¶ 3 (1994) ("The goal of [a spectrum cap] is to ensure that a single entity will not have the ability to influence or control a large portion of the available mobile wireless spectrum and thereby undermine competitive pricing for wireless services."); In the Matter of Establishment of Rules and Policies for the Digital Audio Radio Satellite Service, *Notice of Proposed Rule Making*, FCC 95-229, IB Docket No. 95-91, GEN Docket No. 90-357, (released June 15, 1995) ("DARS NPRM") (purpose of spectrum cap is to ensure reasonable competition).

[136] Brenner and Woodbury at 60. For that reason, the Commission excluded narrowband services from the CMRS cap because "there is little risk that an entity could use narrowband allocations to exert undue market power over CMRS as a whole." See Part 22 Rewrite Order at ¶ 69 (discussing CMRS Third Report and Order, 9 FCC Rcd at 8109-8110).

[137] See id. In light of the dominant power of incumbent LECs, it is unlikely that any competitor will obtain significant market share in any local market in the near term. Id. at 3.

[138] Id.

Consequently, Brenner and Woodbury characterize the proposed spectrum cap as "not necessary."[139]

If utilization of fiber and copper by carriers is excluded in determining the applicable market, the spectrum cap should nonetheless still be raised. Even without those competitors, the proposed cap results in markets well within the unconcentrated range.[140] Raising the cap to 14 paired channels -- using a "worst case" scenario -- places those markets only in the "modestly concentrated" range. Accordingly, even with a narrower market definition, competitive concerns do not justify the low levels of the proposed cap.[141]

Moreover, because the 37 and 39 GHz bands are part of a much broader market, there is no need for the FCC to presume that there must be five licensees in the 37-40 GHz band in order to ensure that workable competition exists. The Commission has often chosen spectrum caps that guaranteed a smaller number of competitors. In adopting a cap for general wireless communications services ("GWCS") -- a service which the FCC has found to be similar to that of the 37-40 GHz band[142] -- the FCC stated that the cap guaranteed that there would be "at least two competing entities."[143] That number, concluded the FCC, would "encourage[] competition and avoid[] excessive concentration of

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[139] Id.

[140] See Sections VI.A.2 & A.3.

[141] As discussed in Section VI.A.3, even if the spectrum-based market itself is narrowed, a spectrum cap increase to 1000 MHz yields only a "moderately concentrated" market.

[142] See NPRM at ¶ 76.

[143] GWCS, 78 RR.2d at 1186 ¶ 50.

licenses."[144] Here, the proposed cap is sufficient to allow for no less than five separate competitors in this spectrum band alone -- far more than the FCC felt necessary for the "similar" GWCS service. On that basis, the level of the proposed cap appears needlessly low.[145]

Finally, a cap could preclude licensees from achieving available economies of scale. Spectrum aggregation should yield economies of scale. There is no evidence that such economies would not continue to be realized with the aggregation of spectrum beyond the proposed cap. Moreover, limiting the amount of spectrum that may be held by licensees may inhibit further development of applications in the spectrum band. In light of the above, the proposed cap is unreasonable and should be raised, if not removed entirely. If a cap is imposed, WinStar believes it should be no less than 1 GHz.

4. Attribution limits should be raised

The NPRM proposes setting the attribution limit at 5 percent. This means that a firm obtaining a 6% interest in another company would be constrained by the spectrum cap in the number of licenses it could hold.[146] The proposed attribution limit is unnecessarily low and should be significantly increased.

Brenner and Woodbury note that small ownership interests do not have the same effect on behavior and on the exercise of market power

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[144] Id. See also DARS NPRM, (proposing cap that could result in only three competitors).

[145] In other services, the Commission has found that workable competition would exist under a cap providing for only four competitors. See, e.g., DARS NPRM.

[146] Brenner and Woodbury at 61.

as does full ownership.[147] That is, the taking of a partial interest in another company will result in a smaller increase in effective concentration and less impact on market behavior than if the companies had merged.[148] Thus, a low attribution level "effectively tightens the constraint of the spectrum cap" when a licensee acquires a partial ownership interest in another licensee.[149] According to Brenner and Woodbury, "this suggests that the appropriate level of the spectrum cap and of the trigger point for ownership, should be considered together." Moreover, "[v]ery low trigger points for ownership interest should not be necessary if, even under the spectrum cap, concentration in the product market can only rise to levels where the exercise of market power is unlikely."[150] As shown, control over the 37-40 GHz band would not confer market power given the presence of fiber and copper and other spectrum competitors. Nor would raising the spectrum cap result in the market reaching levels considered "highly concentrated." Thus, there is no need for such a tight restriction on attribution. That limit should be raised substantially. WinStar suggests that a more appropriate limit would be a 25% ownership interest in a public company and 49% ownership in a private company.

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[147] Id.

[148] Id.

[149] Id.

[150] Id. at 62.

5. Incumbents should not be required to build out their system according to an artificial government timetable

In the competitive circumstances of the 37-40 GHz band, build out requirements are unnecessary. Under any circumstances, the NPRM's proposed build out requirements are unduly stringent. Moreover, the build out plan proposed in the NPRM appears to be designed primarily to achieve "reclamation" since failure to meet the strict build out requirements results in forfeiture of a licensee's spectrum. As shown below, there is no reasonable justification for the build out plan. Adoption of such a plan may have a negative effect on those licensees "who are responsibly developing [their] spectrum."[151]

a. The proposed build out requirements unnecessarily take for the Commission the role appropriately played by market forces

The proposed build out requirements represent the agency's attempt to substitute its judgment for that of the market. As the FCC is unlikely to have sufficient information to determine the proper pace of build out, the Commission should rely on competitive forces to guide the build out of the 39 GHz band.[152]

The build out requirements appear predicated on the Commission's belief that payment for licenses is a prerequisite to responsible

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[151] NPRM at 106.

[152] See Brenner and Woodbury at 66. See also In the Matter of Amendment of Part 95 of the Commission's Rules to Modify Construction for Interactive Video and Data Service (IVDS) Licenses, *Report and Order*, FCC 95-506, WT Docket No. 95-131 ¶ 6 (released Jan. 16, 1996) ("IVDS Report and Order") (relying on the market to govern build out as opposed to FCC benchmarks will give licensees greater flexibility in selecting service options, obtaining financing, and selecting equipment).